

Recovery Plan Action Status

Plan Name: Watercress Darter

Plan Status: Final Revision 2

Plan Date: 29-Mar-93

Lead Agency: USFWS

Lead Office: Mississippi Ecological Services Field Office

(601)

965-4900)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Watercress darter (Etheostoma nuchale)	1	1	Monitor habitat and populations	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Alabama Department of Conservation and Natural Resources, National Wildlife Refuge , USFWS Regional Office 4 - Atlanta	Research: Competition, Research: Demographic Studies, Research: Disease, Research: Environmental Contaminants, Research: Genetics, Research: Habitat Requirements, Research: Habitat Status, Research: Management Techniques, Research: Other Information, Research: Population Surveys, Research: Predation, Research: Taxonomic Studies	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	Biennially
Watercress darter (Etheostoma nuchale)	1	2.1	Study habitat degradation	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Alabama Department of Conservation and Natural Resources, Alabama Department of Environmental Management, National Wildlife Refuge , USFWS Regional Office 4 - Atlanta	Research: Habitat Requirements, Research: Habitat Status	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	As determined by 1

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Watercress darter (Etheostoma nuchale)	2	2.2	Determine optimum habitat	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Alabama Department of Conservation and Natural Resources, Alabama Department of Environmental Management, USFWS Regional Office 4 - Atlanta	Research: Demographic Studies, Research: Environmental Contaminants, Research: General, Research: Genetics, Research: Habitat Requirements, Research: Habitat Status, Research: Management Techniques, Research: Migration, Research: Other Information, Research: Population Surveys, Research: Propagation	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	Costs to be determined
Watercress darter (Etheostoma nuchale)	2	2.3	Determine recharge areas and potential contamination	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Geological Survey of Alabama , National Wildlife Refuge , USFWS Regional Office 4 - Atlanta	Work type not yet selected	Labor type not yet selected	Task duration and costs to be determined

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Watercress darter (<i>Etheostoma nuchale</i>)	1	2.4	Implement corrective action	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Alabama Department of Conservation and Natural Resources, Alabama Department of Environmental Management, National Wildlife Refuge , USFWS Regional Office 4 - Atlanta	Acquisition: Easement, Acquisition: Fee Title, Acquisition: General, Acquisition: Lease, Acquisition: Management Agreement, Acquisition: Other, Management: General, Management: Habitat Maintenance and Manipulation, Management: Land Use, Management: Planning, Other: Administration, Other: Information and Education, Other: Law Enforcement, Other: Regulations, Research: Habitat Requirements, Research: Habitat Status, Research: Management Techniques	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	As determined by 2.1
Watercress darter (<i>Etheostoma nuchale</i>)	2	3.1	Conduct genetic and viability study	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Alabama Department of Conservation and Natural Resources, National Wildlife Refuge , USFWS Regional Office 4 - Atlanta	Research: Genetics	Contract, Species Expert	Costs to be determined
Watercress darter (<i>Etheostoma nuchale</i>)	2	3.2	Prepare for captive propagation, initiate if warranted	Complete	Prior to FY 1995	FY 2005	U.S. Fish and Wildlife Service, Ecological Services Division, Alabama Department of Conservation and Natural Resources, Research , USFWS Regional Office 4 - Atlanta	Research: Genetics, Research: Propagation, Research: Reintroduction	Contract	Costs to be determined

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Watercress darter (<i>Etheostoma nuchale</i>)	3	3.3	Prepare transplant proposal and transplant darters	Complete	Prior to FY 1995	Prior to FY 1995	U.S. Fish and Wildlife Service, Ecological Services Division, Alabama Department of Conservation and Natural Resources, USFWS Regional Office 4 - Atlanta	Management: Other, Management: Propagation, Management: Reintroduction, Research: Competition, Research: Demographic Studies, Research: Disease, Research: Genetics, Research: Management Techniques, Research: Migration, Research: Population Surveys, Research: Propagation, Research: Reintroduction	Contract, Internal Field Assistance, Internal Technical Assistance, Species Expert	Task duration and costs to be determined
Watercress darter (<i>Etheostoma nuchale</i>)	2	4.1	Protect Glenn Springs	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Alabama Department of Conservation and Natural Resources, Alabama Department of Environmental Management, USFWS Regional Office 4 - Atlanta	Management: Habitat Maintenance and Manipulation, Management: Land Use, Other: Information and Education, Other: Law Enforcement, Other: Regulations, Research: Habitat Requirements	Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	Costs incidental to normal operation

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Watercress darter (<i>Etheostoma nuchale</i>)	2	4.2	Protect Roebuck Springs	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Alabama Department of Conservation and Natural Resources, Alabama Department of Environmental Management, USFWS Regional Office 4 - Atlanta, City of Birmingham, Alabama	Management: Depredation Control, Management: General, Management: Habitat Maintenance and Manipulation, Management: Land Use, Management: Planning, Other: Administration, Other: Information and Education, Other: Law Enforcement, Other: Regulations, Research: Habitat Status, Research: Management Techniques, Research: Population Surveys	Contract, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	Costs to be determined Roebuck Springs Due to population catastrophe in 2008, ongoing monitoring and habitat restoration continues. genetic conservation and augmentation are of concern at Roebuck Springs. 7 Springs and Glenn Springs Continued development of neighboring land is worrisome due to possibility of siltation problems.

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Watercress darter (<i>Etheostoma nuchale</i>)	3	4.3	Protect other habitat	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Alabama Department of Conservation and Natural Resources, Alabama Department of Environmental Management, USFWS Regional Office 4 - Atlanta	Acquisition, Acquisition: Easement, Acquisition: General, Acquisition: Management Agreement, Acquisition: Other, Management: Depredation Control, Management: General, Management: Habitat Maintenance and Manipulation, Management: Land Use, Management: Other, Management: Planning, Management: Predator and Competitor Control, Other: Administration, Other: Information and Education, Other: Law Enforcement, Other: Regulations, Research: Environmental Contaminants, Research: Habitat Requirements, Research: Habitat Status, Research: Population Surveys, Research: Taxonomic Studies	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	Costs to be determined

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Watercress darter (<i>Etheostoma nuchale</i>)	2	4.4	Protect recharge areas	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Alabama Department of Conservation and Natural Resources, Alabama Department of Environmental Management, National Wildlife Refuge , USFWS Regional Office 4 - Atlanta	Acquisition, Acquisition: Easement, Acquisition: General, Acquisition: Management Agreement, Acquisition: Other, Management: General, Management: Habitat Maintenance and Manipulation, Management: Land Use, Management: Planning, Other: Administration, Other: Information and Education, Other: Law Enforcement, Other: Regulations, Research: Environmental Contaminants, Research: Habitat Requirements, Research: Habitat Status, Research: Population Surveys	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	Costs to be determined